



CITY OF SANTA BARBARA

COUNCIL AGENDA REPORT

AGENDA DATE: September 14, 2010

TO: Mayor and Councilmembers

FROM: Engineering Division, Public Works Department

SUBJECT: Increase In Extra Services For Design Of The Carrillo/Anacapa Intersection Traffic Safety Improvements

RECOMMENDATION:

That Council authorize an increase in the extra services amount with Penfield & Smith (P&S) for design services for the Carrillo/Anacapa Intersection Traffic Safety Improvements Project (Project), Contract No. 23,095, in the amount of \$20,000, for a total expenditure authority of \$52,725.

EXECUTIVE SUMMARY:

The primary goal of this Project is to improve safety by increasing signal visibility at this intersection, which has among the highest number of collisions in the City. The Public Works Department contracted with P&S in 2008 to evaluate existing conditions and develop recommendations for the Anacapa/Carrillo intersection with the primary goal of improving safety for all modes of transportation through increased signal visibility. P&S proposed mast arms across Carrillo Street (Carrillo) in both directions and curb extensions for southbound Anacapa Street (Anacapa) to improve the visibility of the traffic signals.

On September 25, 2008, the Transportation Circulation Committee (TCC) found the conceptual Project consistent with the Circulation Element. On December 10, 2008, the Historic Landmarks Commission (HLC) gave the Project preliminary approval. On April 21, 2009, Council awarded P&S a contract to complete the final design of the Project. At that meeting, there was discussion with Council regarding the elements of the Project, including curb extensions. With Council approval, staff proceeded with the final design. On June 24, 2010, the HLC granted the Project final approval. On July 21, 2010, the HLC reconsidered their approval of the Project and voted five to two to maintain the intersection in its current configuration with the exception of added signal pole mast arms on Carrillo.

In order to address the changes to the project as approved by HLC, Staff is returning to Council to request an increase in extra services to the current P&S contract to cover redesign costs.

DISCUSSION:

BACKGROUND

The Anacapa/Carrillo intersection has been identified as having among the highest number of motor vehicle collisions in the City. Traffic collision records report 62 collisions between December 31, 2003, and December 31, 2007. The remaining summary focuses on 49 collisions that were reported as having happened within 75 feet of this intersection because they are most relevant to the intersection operations.

Of the 49 collisions, 33 were broadside collisions and 5 were rear-end collisions (the other 11 were unpreventable or not correctable with changes to the intersection control, for example driving under the influence or other impairment). In 28 of the 49 collisions a red light violation occurred. The most probable cause for collisions of this nature, at an intersection where the signal timing is adequate, is poor signal visibility.

Attachment 1 shows the distribution of accident fault for 47 of the 49 collisions. Two collisions were due to the drivers hitting parked cars.

INTERSECTION ANALYSIS

The Public Works Department contracted with P&S to evaluate existing conditions and develop recommendations for the Anacapa/Carrillo intersection with the primary goal of improving safety for all modes of transportation through increased signal visibility. P&S collected traffic counts at the intersection, observed the intersection operations, and determined the existing intersection levels of service for vehicles.

Intersection turning movement counts, pedestrian counts, and driveway counts were collected on Tuesday, May 20 and Thursday, May 22, 2008, during the morning, noon, and evening peak hours. Based on the data collected, P&S determined the intersection's Level of Service (LOS) using the Intersection Capacity Utilization methodology, and conducted operational analyses using Synchro software, which is an industry standard.

Anacapa/Carrillo is operating at a LOS B or higher during all peak hours, which is well within the City's acceptable vehicular LOS standard. However, based on P&S's observations the following operating conditions were noted.

In general, a significant number of conflicts and "near misses" through the intersection were observed, primarily as a result of the following:

- There is insufficient guidance (lack of pedestrian signal heads, etc.) at the intersection and the traffic signals are not very visible until vehicles have

reached the intersection. During their observations, one vehicle attempted to drive northbound on Anacapa in the wrong direction.

- Conflicts were observed between turning vehicles and pedestrians crossing the street. Approximately 290 pedestrians traveled through the intersection during the morning peak hour, 650 during the noon peak hour, and 500 during the evening peak hour. The south and the west legs consistently have the heavier pedestrian activity.
- Vehicles turning into the Santa Barbara Bank and Trust driveway (southwest corner) obstructed the through traffic on Anacapa. Vehicles were observed blocking Anacapa while waiting for pedestrians to cross the driveway, or for cars in the bank driveway that were waiting for a parking space.
- The eastbound right-turn pocket is +/- 1 vehicle length, adds only an additional 3 feet of roadway width, and does not appear to serve any function except to increase clearance to the curb face. Traditionally, a right-turn pocket would increase the roadway width by a full lane width (10 to 12 additional feet). The outer eastbound through lane is wide enough to accommodate the separate eastbound right turn movement.
- Vehicles were observed speeding up at a yellow light, and occasionally running the red light. This occurred at all of the approaches.

PROPOSED IMPROVEMENTS

Given the collision history data and field observations, P&S proposed the following improvements:

- Install new signal poles with mast arms over both directions on Carrillo (two sets) to improve signal visibilities along that street.
- Install curb extensions and directional ramps on the northeast and southeast side of Carrillo. The curb extensions will allow the traffic signal pole to be moved further into the intersection and improve the signal visibility for southbound Anacapa drivers, without adding mast arms. Because this intersection is a main transit route and used by large delivery trucks, curb extensions were not recommended for the northwest and southwest sides of the intersection due to turning radius requirements for those vehicles.
- Install new pedestrian signal indicators with countdown heads for all directions.
- Relocate the traffic control equipment cabinet on the southeast side of Carrillo. This cabinet has been replaced frequently as a result of its poor placement relative to the traffic collisions at this intersection.

- Add landscaping enhancements that are consistent with the City's Water Wise Landscaping requirements and the El Pueblo Viejo Landscaping Guidelines.

DISCRETIONARY REVIEW

The Project was presented to the TCC on September 25, 2008. The TCC found the Project consistent with the Circulation Element. The Project was also presented to the HLC on December 10, 2008, where it received preliminary approval. On April 21, 2009, the Project went before Council, and P&S was awarded a contract to complete the final design. At that meeting, there was discussion with Council regarding the elements of the Project, including the curb extensions. With Council approval, staff preceded with final design. (See Attachment 2)

On January 27, 2010, staff was informed that a \$400,000 Safety Highway Index Program Grant was awarded to the City for the Project as described during discretionary review. Project elements included mast arms on Carrillo, curb extensions at two locations, the removal of the eastbound Carrillo right turn pocket, and pedestrian countdown timers.

On June 24, 2010, the Project was presented again to the HLC. Although no major changes to the Project had occurred since the HLC's initial review in 2008, the preliminary approval for the Project had expired and the Public Works Department was required to present the entire Project again. At that meeting the HLC approved the Project with a five to four vote. The votes in opposition centered on non-design related issues with the curb extensions.

On July 6, 2010, the Santa Barbara Trust for Historic Preservation (appellant) appealed the HLC final Project approval decision. Its main concerns were the removal of the substandard right turn lane on Carrillo and curb extensions. On July 20, 2010, staff met with the appellant to go over the proposed Project. After that meeting, the only main issue was removal of the substandard right turn lane. Removing this right-turn pocket was seen by P&S as a clean-up item of the intersection since the removal of the 3-foot wide and 15-foot long turn pocket still allows for the right turn movement. Because the pocket does not significantly affect the primary goal of the Project, the Public Works Department will leave it in its current configuration.

On July 21, 2010, the HLC voted to reconsider its approval of the Project. The Public Works Department gave the Project presentation again. Because the HLC's concerns regarding the Project were not design related, staff focused on its traffic engineering aspects. Staff explained that removing the curb extensions would result in insufficient traffic signal visibility for southbound Anacapa drivers. To correct the signal visibility issue for southbound Anacapa, a mast arm would be required.

The primary purpose of the proposed curb extensions is to improve the signal visibility of the traffic signal on southbound Anacapa. The curb extensions also provide an additional benefit for pedestrians by shortening the crossing distance and, therefore, the amount of time pedestrians are in the street. The crosswalk distance would be reduced by 3 feet, reducing both pedestrian exposure and allowing approximately one second reduction in

the pedestrian clearance interval, and a one second less delay to turning vehicular traffic per cycle. The consideration of these design elements were part of the TCC approval, preliminary approval by the HLC, and Council award of contract approval for final design of the Project.

A redesign of the Project will take approximately three months; however, due to additional federal grant requirements, the redesign is not likely to cause significant Project delays. Construction is estimated to start in spring 2011.

BUDGET/FINANCIAL INFORMATION:

The following summarizes all estimated total project costs:

ESTIMATED TOTAL PROJECT COST

| | <i>Current Project Costs</i> | <i>Redesign Costs</i> |
|---|---|----------------------------------|
| Conceptual Study/Design with P&S | \$23,600 | \$23,600 |
| Conceptual Landscape Plans | \$3,880 | \$3,880 |
| Consultant Design Services (original contract amount) | \$32,725 | \$32,725 |
| Final Landscape Plans (by Contract) | \$3,565 | \$3,565 |
| Phase 1 Archaeological Report/Section 106 Study for CEQA/NEPA | \$20,000 | \$20,000 |
| Consultant Design Services (Redesign) | \$0 | \$20,000 |
| City Engineering Costs for Design Phase Other Design Costs | \$18,300 | \$23,300 |
| Subtotal | \$102,070 | \$127,070 |
| Estimated Construction Contract w/Change Order Allowance | \$415,000 | \$335,000 |
| Estimated Construction Management/Inspection (by City) | \$64,000 | \$50,000 |
| Estimated Other Construction Costs (testing, etc.) | \$2,500 | \$2,500 |
| Subtotal | \$481,500 | \$387,500 |
| TOTAL PROJECT COST | \$583,570 | \$514,570 |

The total redesign cost is \$25,000 (\$102,070 to 127,010); however construction costs are expected to be reduced by \$94,000 (\$481,500 to \$387,500), thereby reducing the total Project cost by approximately \$69,000 (\$583,570 to \$514,570). The \$400,000 Safety Highway Index Program grant can only be used for construction costs; therefore, redesign costs will need to come from reallocation of City Streets Capital.

CONCLUSION

The redesign of the Project to address the HLC's concerns, without curb extensions but with signal pole mast arms on Anacapa and Carrillo, will address the primary signal visibility goals for the Project; however, net benefit for pedestrians will be the installation

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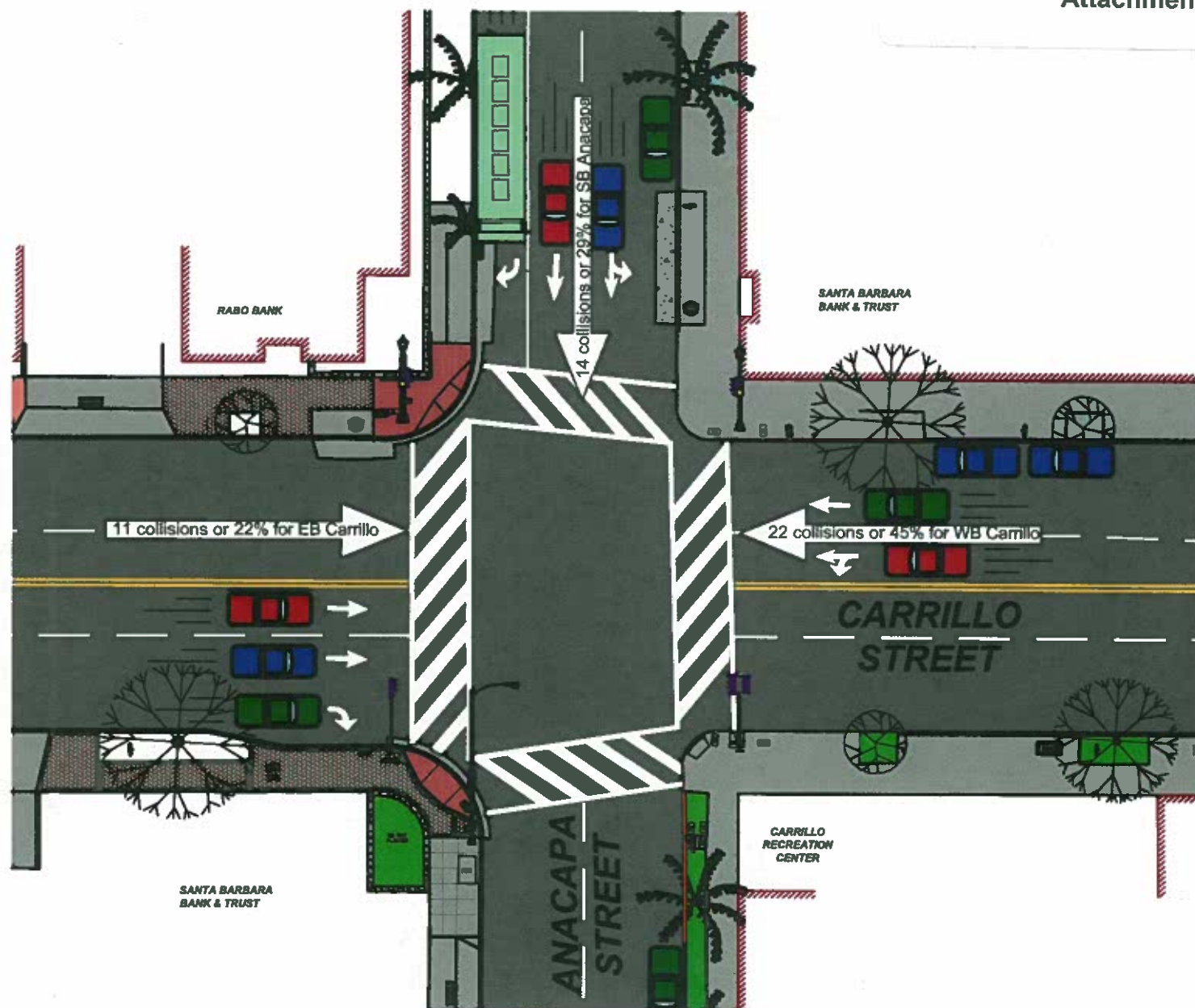
of pedestrian countdown timers. To make the design modifications required, the Public Works Department requests that Council approve a \$20,000 increase in extra services to the P&S contract to redesign the Project.

- ATTACHMENTS:**
1. Carrillo at Anacapa Intersection Existing Condition
Distribution of Accident Fault
 2. Carrillo at Anacapa Intersection Proposed Improvements

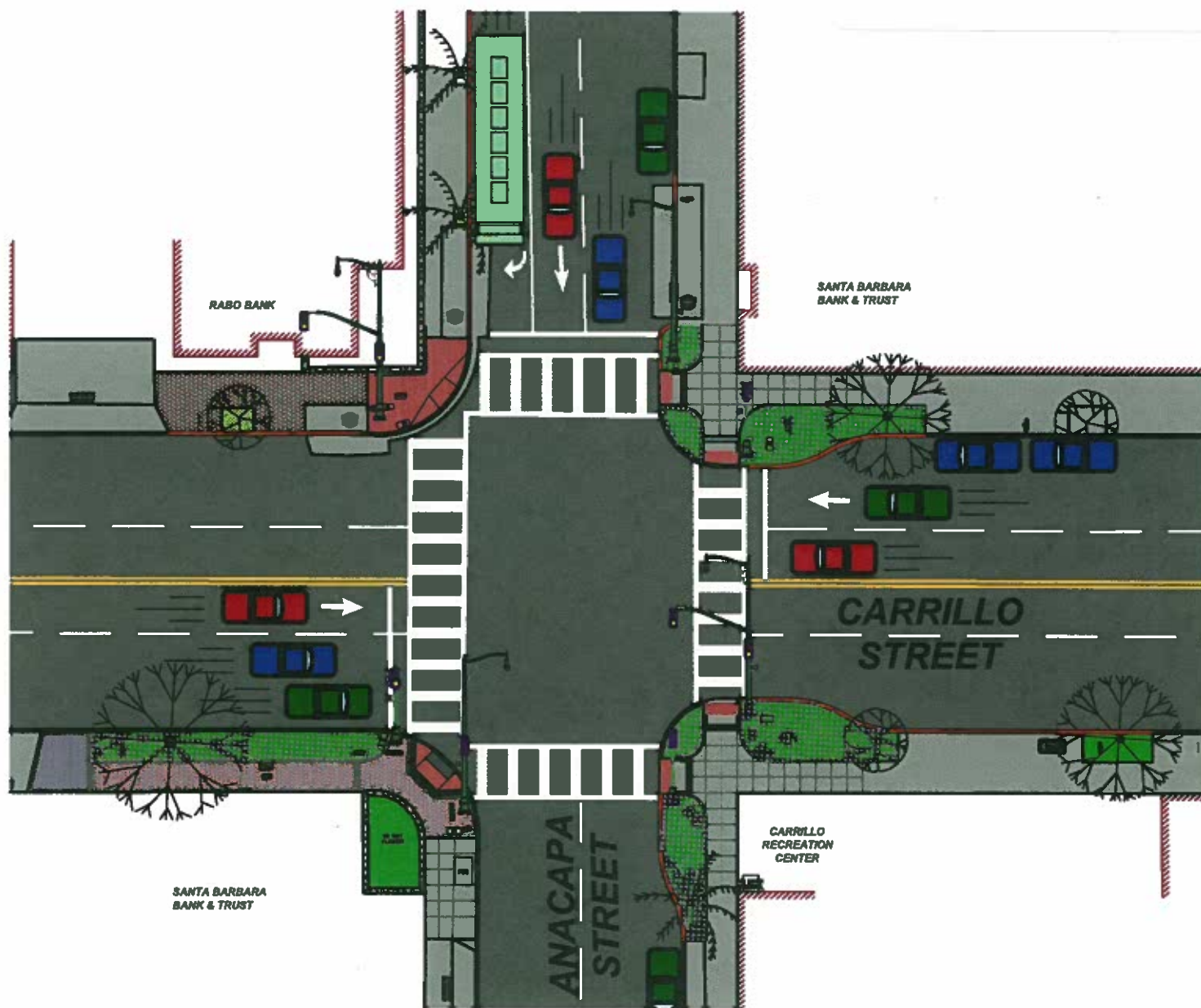
PREPARED BY: Pat Kelly, Assistant Public Works Director/City Engineer/JWG/kts

SUBMITTED BY: Christine F. Andersen, Public Works Director

APPROVED BY: City Administrator's Office



CARRILLO AT ANACAPA INTERSECTION
EXISTING CONDITION
DISTRIBUTION OF ACCIDENT FAULT



CARRILLO AT ANACAPA INTERSECTION
PROPOSED IMPROVEMENTS